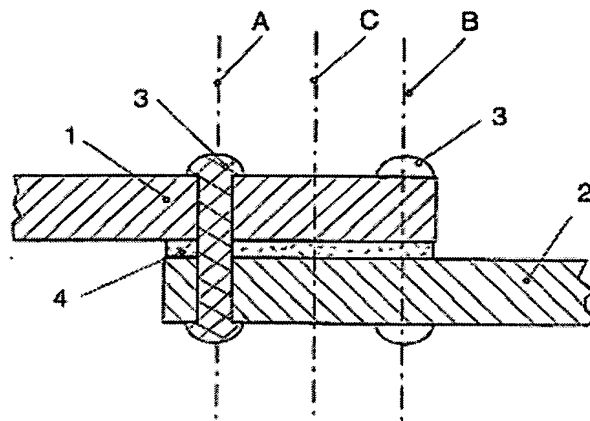


Joining of magnesium and plastic components especially of an automobile body

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Abstract of DE19800035

A component (2) with a magnesium surface is joined to a component (1) with a plastic surface by a forge joining process and/or an adhesive bonding process. Independent claims are also included for the following: (i) a method of pretreating the joint region of one or more components prior to the above joining process; and (ii) a joined assembly produced by the above joining process. Preferred Features: The forge joining process comprises clinching; riveting, especially with a galvanized steel rivet or a semi-hollow and/or plastic coated aluminum rivet; or screwing, especially with a self-tapping screw. A sealant may be used between the magnesium surface and the rivet or screw to prevent corrosion and an adhesive (4) may be provided around the rivet or screw perforation point. The components are pretreated by surface activation and/or cleaning using an organic solvent (especially acetone or MEK), an alkaline cleaner and/or a detergent/surfactant solution. The component (2) with a magnesium surface may be (a) pre-heat treated at 150-200 deg C; (b) mechanically cleaned by brushing (especially with fibers on which resin-bonded Al₂O₃ is applied), lapping, grinding, polishing or corundum grit blasting; (c) provided with an adhesion promoter which may be a phosphonic acid derivative and/or which is formed by anodizing in a solution of 8-hydroxyquinoline, a 8-hydroxyquinoline derivative containing a spacer to the polymer adhesive, caustic soda, phosphoric acid and/or sulfuric acid; and/or (d) subjected to a fluorozirconate and/or chromating pretreatment. The component (1) with a plastic



surface may be pretreated by fluorination
and/or low pressure plasma treatment.

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